

SEQUENCE LISTING

SEQ. ID. No. 1

3bf4 3000 bp

5 CCGCCGGCCGGGGCGCCCTGGCTGCACTCAGCGCCGGAGCCGGGAGCTAGCGGCCGCCGCCATGTCCCACCAAGACCGGCATCCAA
 GCAAGTGAAGATGTTAAAGAGATCTTTGCCAGAGCCAGAAATGGAAGTACAGACTTCGAAAAATATCTATTGAAAAATGAGCAA
 CTGTGTGATTGGATCATATAGTCAGCCTTCAGATTCCTGGGATAAGGATTATGATTCCCTTTGTTTACCCTGTGGAGGACAAA
 CAACCATGCTATATATTATTTCAGGTTAGATTCTCAGAAATGCCAGGGATATGAATGGATATTCAATTGCTGGTCTCCAGATCAT
 TCTCATGTTTCGTCAAAAAATGTTGTATGCAGCAACAAGAGCAACTCTGAAGAAGGAATTTGGAGGTGGCCACATTAAGATGAA
 GTATTTGGAACAGTAAAGGAAGATGTATCATACATGGATATAAAAAATACTTGTCTGTCACAATCTTCCCTGCCCTGACT
 10 GCAGCTGAGGAAGAATCAGACAGATTAAAAATCAATGAGGTACAGACTGACGTGGGTGTGGACACTAAGCATCAAACTACAA
 GGAGTAGCATTTCCCATTTCTCGAGAAGCCTTTCAAGCTTTGGAAAAATTTGAATAATAGACAGCTCAACTATGTGAGTTGGAA
 ATAGATATAAAAAATGAAATTAATAATTTTGGCCAAACACAACAAATACAGAACTGAAAGATTTGCCAAAGAGGATTCCCAAGGAT
 TCAGCTCGTTACCATTCTTTCTGTATAAACATTCCTCATGAAGGAGACTATTTAGAGTCCATAGTTTTTATTATTCAATGCCT
 GGATACACATGCAGTATAAGAGAGCGGATGCTGTATTCTAGCTGCAAGAGCCGTCTGCTAGAAATTTGTAGAAAGACAACACTACAA
 15 ATGGATGTAATTAGAAAAGATCGAGATAGACAAATGGGGATGAGTTGACTGCAGACTTCCTTTATGAAGAAGTACATCCCAAGCAG
 CATGCACACAAGCAAAGTTTTCGAAAACCAAAGGTCTGTCAGGAAAAAGAGGAATTCGAAGACTAATTAGGGGCCAGCGGAA
 ACTGAAGCTACTACTGATTAAAGTCATCACATTAAACATTGTAATACAGTTTAAAAAGTCCAGCTTTTAGTACAGGAGAAC
 TGAATCATTTCCATGTTGATATAAAGTAGGGAATAAATTTGTACTTTTTTGGAAAAATAGCACTTTTCACTTCTGTGTGTTTTTAA
 AATTAATGTTATAGAAGACTCATGATTCTATTTTGAAGCTAGAAAAGGGTTCAACATAATGTTTAAATTTTGTACAC
 20 TGTTTTTCATAGCGTTGATTCCACACTTCAAAATCTTCTTAAATTTTATACAGTTGGGCCAGTTCTAGAAAGTCTGATGTCTCA
 AAGGGTAAACTTACTACTTTCTTGTGGGACAGAAAGACCTTAAAAATATTCATATTACTTAATGAATATGTTAAGGACCAGGCTA
 GAGTATTTTCTAAGCTGGAACCTTAGTGTGCTTGGAAAAGCCGCAAGTTGCTTACTCCGAGTAGCTGTGCTAGCTCTGTCAGA
 CTGTAGGATCATGCTGCAACTTTTAGAAAATAGTGCTTTATATTGAGCAGTCTTTTATATTTGACTTTTAAAAATAGCATTA
 AAATTGAGATCAGCTCAGCTGTAACCTTTAAGGGTACAGATATTTTCTATACAGTTCAGGATTCTGATGACATTGAAAGACTT
 25 TAAACAGCCTTAGTAAATATCTTTCTAATGCTCTGTGAGGCCAAACATTTATGTTGAGATTGAAATTTAAATTAATATCATTC
 AAAAGGAAACAAAAATGTTGAGTTTAAAAATCAGGATTGACTTTTTCTCCAAAACCATACATTTATGGGCAAATTTGTGTTCT
 TTTATCACTTCCGAGCAAATACTCAGATTAAAAATTTAAAGTCTGGTACTTAACAGGCTAACGTAGATAAACACCTTAA
 TAATCTCAGTTAATACGTATTTCAAAACACATTTAAGTGTCTTCTAATGCTTTGCAATATCAGTTACAACCTAGAGAGATTTT
 GAGCTTCATATTTCTTTGATACCTTGAATAGAGGGAGCTAGAACACTTAATGTTTAACTGTTAAACCTGCTGCAAGAGCCATA
 30 ACTTTGAGGCATTTTCTAAATGAACGTGGGGATCCAGGATTGTAAATTTCTGATCTAAACCTTTATGCTGCATAAATCACTTA
 TCGGAAATGCACATTTTCATAGTGTGAAGCACTCATTCTAAACCTTATATCTAAGGTAATATATGCACCTTTCAGAAATTTGT
 GTTCGAGTAAGTAAAGCATATTAGAAATATTTGTTGGGTGACAGATTTTAAAAATAGAAATTTAGAGTATTTGGGGTTTTGTTGT
 TTACAAATAATCAGACTATAATATTAAACATGCAAAATACTGACAAATAATGTTGCACTTGTGTTTACATAAGATATAAGTTGTT
 35 CCATGGGTGTACAGCTAGACAGACACATACACCCAAATATTGCAATTAAGAACTCTGGAGCAGACCATAGCTGAAGCTGTTA
 TTTTCAGTCAGGAAGACTACCTGTCTGAAGGTATAAAATAATTTAGAAGTGAATGTTTTCTGTACCATCTATGTGCAATTAT
 ACTCTAAATTCCTACACTACATTAAAGTAAATGGACATTCAGAAATATAGATGTGATTATAGTCTTAAACTAATTATTATTA
 AACCAATGATTGCTGAAAAATCAGTGTGATTTGTTATAGAGTATACTCATCGTTTACAGTATGTTTTAGTTGGCAGTATCAT
 40 ACCTAGATGGTGAATAACATATTCCAGTAAATTTTATAGCAGTGAAGAATTACATGCCTTCTGGTGGACATTTTATAAGTGC
 ATTTTATATCACAATAAAAAATTTTTCTCTTTAAAAAATAAACAAGAAAAAATAA

SEQ. ID. No. 2

1b11 723 bp

45 TGGAAAGCTGTCTATGGTTACCGTCTCTAACGTTGGACTCTTAAGAAAAATGATTATTCCTGGTTTTCTAGACAGGCCAAATGTAATT
 CACCTACGTGGCAGATTAAAGAGGTGGGCTTACTAGATTGATTGGGTATTGAGCATGCTCTGAATGACAGTCCCCAAAAAGGA
 CCTCTATCCGTTCTCCCTTGGGGAAGGGCTTTGCCACTTCCATGTCAATGTGGCAGTTGAGCTTGGAAATTTGGTGGCTTG
 TACAACATAAGCATTACTTCTCCAGATGTGCTGTGTAGAAATGGTCAATGTTCAAAACTGTAGCTACTATGTGGACAGGGG
 GGCAGCAAGGACCCCACTTTGTAAACATGTTTGGGGGAAGTGTGTTTTTCAATTTCTTATTACCTGGCAAAATAATCCAG
 50 GTGGTGTGTGAGTCAACAGTAGAGATTATAAAGTCCGAAGTGAAGTACAGCTTACAAACAGTGCAGCTCAACGAGGAGAT
 GCTGCACCTGAACCCACWGAAGCGAACTCAAAAGAGAAGAAAGCAAAACCAAGAACCTCTCTGATGRCGTTTCTCAGACAAATG
 GTAAGCCCCCTTACTTCCAGTATAGGAAACCTAAGATACCTAGAGCGGCTTTTGGGAACAATGGGCTCATGCCACAGGTAGTAGG
 AGACATAATTGTAGCTGGTGTGTATGGAATGTGAATGGAATATGGATTGCG

SEQ. ID. No. 3

cc49 1507 bp

55 GCAGGTTGCTGGGATTGACTTCTTGCTCAATTGAAACACTCATTCATGAGACAAAGAGCACTAATGCTTTGTGCTGATTTCAT
 ATTTGAATCGAGGCATTGGGAACCCCTGTATGCCCTTGTGTTGTTGGAAGAAAGCAGTGACACCATCACTGAGCTTCTTAAAGTTTCG
 AAGAAGTTAGAGGACTATACACTTTCTTTTGAACCTTTATAATAATATTTTGTCTGGTTTTGGAACCCAGGACTGTTAGAGGG
 TGAGTGACAGGCTTACAGTGGCCTTAATCCAACTCCAGAAATTTGCCAACGGAACTTTGAGATTATATGCAATCGAAAGTGAC
 60 AGGAAACATGCCAACTCAATCCCTCTTAATGTACATGGATGGCCAAGAGTGATTGGCAGCTCTCTTGCCAGTCCGATGGAGATG
 GAGATGCCCTTGTCAATGAAAGGGCCNCCTGTTGTCAATTCGAGCTACACAAAGAAAAAATGTCAATCCGAATCGAGGGGAAT
 ATGCCCTTGTGATTGCAATGCTTTCGAGCCAGACCTTACACATTCAGAAAGACCTTAATAAACATGCTTAAATGCAACACCGGCCT
 ACCCTCTGTGAACCAAGCAGCTTCTTTCGGGTTGAAGCAGAGTATCTCAGTCCGCTTGATAAAAAGTCAAGTGCAGACGAACTCC
 AAGGAAAAGAATTGCAAGGAAAAATGAATTTAGCTGTGAGGTATGTGGGCAGACATTTAGAGTCCGCTTTTGTGTTGAGATCCAC
 65 ATGAGAACACACAGATTCTTTCACTTACGGGTGTAACATGTGCGGAAGAAGTTCAAGGAGCCTTGGTTTCTTAAAAATCAC
 ATGCGGAATCATTAATGGCAAAATCGGGGGCCAGAGCAAACTGCAGCAAGGCTTGGAGAGTAGTCCAGCAACGATCAACGAGGTC
 GTCCAGGTGCACGCGGCCGAGAGCATCTCCTCTCTGCAAAATCTGCATGTTTGTGCTTCTTATTTCCAAATAAAGAAAGT

CTAATTGAGCACCGCAAGGTGCACACCAAAAAAAGCTGCTTTCGGTACCAGCAGCGCGCAGACAGACTCTCCACAAGGAGGAATG
CCGTCTCGAGGGAGGACTTCTGTCAGTTGTTCACTTGTAGACCAAAATCTCACCCTGAAACGGGGAAGAGCCTGTGAGATGC
ATCCCTCAGCTCGATCGGTTTCAACACCTTCCAGGCTTGGCAKCTGGCTACCAAGGAAGAGTTGCCATTGTTGCAAGAGTGAAG
GAATTGGGGCAAGAAGGGAGCACCGACAACGACGATTTCAGTTCCGAGAAGGAGCTTGGAGAAACAAATAAGAACCATTTGTGCA
GGCTCTCGCAAGAGAAAGAGAAGTGCAAACTCCACGGCGAAGCGCCCTCCGTGGACCGGATCCCAAGTTACCCAGTAGC
AAGGAGAAGCCCACTCACTGCTCCGAGTGGCGCAAGCTTTCAGAACCTACCACAGCTGGTCTTGCACTCCAGGGTCC

SEQ. ID. No. 4

cc43 2605 bp

CAAGCTCGAAATTAACCCCTCACTAAAGGGAACAAAAGCTGGAGCTCCACCGCGGTGGCGGCGCTCTAGAACTAGTGGATCCCC
CGGGCTGCAGGAATTCGGCACGAGCTGGGCTACTACGATGGCGATGAGTTTCAGTGGCCGTGGCAGTATCGCTTCCACCCCTT
CTTTACGTTACAACCGAATGTGGACACTCGGCAGAACGAGCTGGCCGCTGGTGTCTCGTGGTCTGCTCTTCCGCTGCA
CAACAGTCCAGCATGACGGTGTAGGAAGCTCAGGAGAGCCGCTTCAACAACGTCAGCTACAGCGAAAGCTTCTGTGGA
GTCGATCCAGATTGTATTAGAGGAAGTGAAGAAAGGGAACCTCGAGTGGTTGGATAAGAGCAAGTCCAGCTTCTGTGATCAT
GTGGCGGAGGCCAGAAATGGGGAACTCATCTATCAGTGGGTTTCCAGGAGTGGCCAGAACCACTCCGTCTTTACCCGTGTA
TGAAGTCACTAATGGGGAAGACAGAGGATGAGGAGTTCACGGGCTGGATGAAGCCACTCTACTGCGGGCTCTGCAGGCCCT
ACAGCAGGAGCAACAGGCCGAGATCATCTGTCAGCGATGGCCGAGGCGTCAAGTTCTTCTAGCAGGGACCTGTCTCCCTTTA
CTTCTTACCTCCACCTTTCCAGGGCTTTCAAAAGGAGACAGACCCAGTGTCCCCCAAGACTGGATCTGTGACTCCACAGAC
TCAAAAGGACTCCAGTCTGAAGGCTGGGACCTGGGGATGGGTTTCTCACACCCCATATGTCTGTCCCTTGGATAGGGTGAAGC
TGAAGCACCGAGGAGAAATATGTGCTTCTTCTCGCCCTACCTCTTTCCTATCTTAGACTGTCTTGGAGCCAGGGTCTGTAA
CCTGACACTTTATATGTGTTACACATGTAAGTACATACACATAGCGCCTGCAGCACATGCTTGTCTCTCTCCCTCCCTCC
CCCTTTAGCTGTCTGTGCTCCCTTCTCAGGCTGGTGTGATCTTCTTAGGGATGGGGGAAGCCCTGGCTGCAGGCAGCCCT
TCCAGGCAATATGAAGTAGGAGGCCACGGGCTGGCAGTGAAGGTGTGGCCCCACACCGATTTATGATATTAATACTCAA
CTCCCAAAAAAAGAAAAAAGCTGAGACTAGTCTCTCTCTCGAGAACTAGTCTCGAGTTTTTTTTTTTTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTTTTTTGGCTTTAAGGATTTTATTATTGTTTCTCTTTTACAGTGTCCACTTTTCTTACTTAATACTACTT
TCCAGTCTCAGAAGCCAGAGGGAAGAAAAAAGACCATGAATCTTCTCTCCAGATTAAAGTACACACTTTGGAAAAACAGAT
TGAAAAACCTTCTGAAAAAGTTGACTGAAATCCAAACCAACATGCCATATTGTTGATGTGCTCATGAAAAATTGTTAAAA
CCTGTTCTAGATAAAGAACAGTCTCAAGTTTTGTACAGCTTACACATAGTACAAGGGTCCCTATGATGATTCTTCTGTAGGA
CGAAATAATGTAATTTTTTCAGTTTTCTGTTTTATACTCTCGATCTCAGAGTTGACTGATTAAACACCTACTCATGCAACA
GAGAATAAGCACTCATATTTTTATAAATTATATGACCAAACTATTTTGGAAATCTTATCTATTGGAGACACAATATGCTGGA
CTAAAGCAATAATTTATTTTATCTCAATGTCTGTGCTAACCTCAATGACTTAGAATGCTTTGCTATATTTTGCCTCTATGCTC
AACCACTGGCTTCTTTTAGCTCTTGAACAAGCCA
AATGCTTCTGCTTCCCTCAGGACCATATTTTGGGACTCTCTTAAAGAAATTCATTTTCTTAATCTTTATCTGGGTAACTTAGT
TTTATCCAACACTTCAGATCTTCCGTAAAAACTCTTCTTATAGAAGCTGTGATGACACTGTCTCTCTTCCAACATACTCA
CCAGCACACATGTAGACTAGATTAGAACCCTCTGTTTTTCTTTTCTACTTTTCTATCATGCTTCCCTCCATTATAATTT
TTTATATGTGTGTAATGTCTGCCCCAAGTCAGTTTCTTCACTAACTATAAACTCCGTAAAGCTGGGATCTTCCAATTTTG
ATCACCACTTAGTACAGTAGGAACACAGTAAAGATTCAATTGGTATTGTTGGAATGAATGAATGATTTTGTAGTAAAGT
CTGGGGGAACCCAGGTGAGAAGAGCTTAGAAAGCAGGTGGAATCCAGGCTAGATAGACTTAGTGTTACTCAAGAAAGGGTAGC
CTGAAAAAAGGTTCAAATTTATAGTCAAGAAATAGTCAAGACATGGGCAAGACAAGAGTGTCTGCTGCGCGAATTCGATATCA
AGCTTATCGATACCGTGCAGCTCGAGGGGGGGCCGGTACCCAATTCGCCCTATAGTGAGTGTATACAATTTCACTGGCCGCTC
GTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACCTTAAT

SEQ. ID. No. 5

41.1 1288 bp

GAGGGCAGCGAGAAGGAGAAACCCAGCCCTGGAGCCCATCTGCTCTGAGCAATGGGTGCGCCCTCGCCAAACACGCCCCG
GCCCTGCCATGCATCAACCCACTCAGCGCCCTGCGTCCGTGGAACAATCACTTGGGCAAGCCACGGAGCCCTTGGCGTCA
CCTTCTGCTCCAGCCCAAGTTCAAGCACAATTTCCATGTTCCACAAGTCGAATCTCAATGTGATGGACAGCCGGTCTTGAGT
CCTGCTCCACAAGGTGAGCCAGCGTGTCCAGGCGCTACTGTTTGAAGACGCGATCAGCCCATGACCTGACCAAGTCCAAA
AGCAAGAAAGCCGAGTCTCGCAAGCACAATCTTGATGTCTCCCACTCAGAACGACGCTGTCTGACATCGCCGACATGGTC
AAAGTCTCCCAAGCCACCCCAAGCCAGCCTCTCTCCAGGGTCCCCCATGAAGCTGGAATGATGTGAGGCGC
TTTGAGGATGTCTCCAGTGAAGTCTCACTTTGCATAAAAGAAAGGCGGCGAGTCCAAGTGAATCTCAGCATCTTCTGATT
CTACAAGCCAGTTTGCCTCGAGCCTCTTCCAGACATCAGAGGGCAAAATACCTGCTGTCTGATCTGGGCCACAAGAGCGTATG
CAAATCTCTAAGTTTACGGGACTCTCAATGACCACATATCAGTCACTGGCTGGCCAACGTCAAGTACAGCTTAGGAAAAACGGG
GGGACAAAATTTCTGAAAAACATGGACAAAGGCCACCCATCTTTTATGCACTGAGTGTGCTTCCAGTTTCAAGACCCCTTCT
ACCTACATCAGTCACTTAGAATCTCAGTGGGTTTCCAAATGAAGGACATGACCCGCTTGTGAGTGGACAGCAAGCAAGGTG
GAGCAAGAGATCTCCCGGTTATGTCGGCTCAGAGGTTCCGAAACAAATAGCTGCGGAAGAGGACACAGACTCTAAATTCAAG
TGTAAGTTGTGCTGTGCGACATTTGTGAGCAACATGCGGTAAACCTCAAGCAAAACGACAGCAAGTCAACCCGAACAC
CATTCACAGTTTGTAAACAGAGTGGATGAAGAAATAGCTCTGAGGACGAATGCTTAGTTTCCACTTCCAGCTGGATCCCT
CACACTGAACCTTCTTCTGTTGACCATCTGCTTCTGACATTGAATCAATTGAATCTCTCTGACACCTGGCTCTGAGAAGA
CTGCCAAAAAAGAAAAAAGAAATTC

SEQ. ID. No. 6

GCAP 2820 bp

ATCCTAAGACGCACAGCCTGGGAAGCCAGCACTGGGGAAGTGGTGTGAGGGATGTGGGTCACTGGGGTGAAGGTGGAGCTTTC
AGGGTCTCCCGTCAATGCAGCTGAGTTTTCTTTGGCAGGGAATTTACCAGCTGAAGAAAGCCTGCCGGCGAGAGCTACAAACTG
AGCAAGGCCAGCTGCTCACACCCGAGGAGGTCTGGACAGGATCTTCTCTGGTGGATGAGAATGGAGATGGTAAGAGGGGCA
GAGATGGGGAGAGTGTGTCCACTCTGCATCATCGCCACTTCTGCGCCGACGTCTTGGGCAAGGCCCTCCACCTTCCAACCC

1b4 1205 bp

SEQ. ID. No. 8

20sa7 456 bp

SEQ. ID. No. 9

Genomic Sequence Encoding ZABC1

CCATCATATTTCTTATTTTTTTGGGCGGAGAGGGGAGACTTGCTCTGTTGCCAGGCTGGACCAGTGGTGCGATCT
TGGCTCACTGCAACCTCCAACCTCTGGGTTCAAGTGATTCCCAAATAGCTGGGATTACAGGTGTGTATTACCATGC
CCAGCTAATTTTTGTATTTTTAGCAGATAAGGGGTTTACCATGTTGGCCAGGCTGGTCTCCAACCTCTGCGCTCA
TGTGATCCACCCACTTCGGCTTCCCAAAGCATTGGGAGTATAGGTGTGAGCCACTATACCCGTCCTCACATCATAT

TTCTAATCCCGAGACTGTAGAGCTGGTGTCTCTTTTCTAATAGGATGTGACGTAGAGAAGTGGAGTTCGCCAAAAAT
ACAGTTTTCACGTATTAGTCAAGTTTCTAAAAACAGTAATAATGTTGAGAGCTGACATAGGGACTAACTTGGTTTT
TTTTTTTTTTTTTTTTTCAAAATTTCTACGAACTTTGATTTTGTCTAAATAAGGACATTAACAAAAAACAAAA
AACTCCACTATTGCCTATTGCCACTATTTGATTTTTAAAAATAAGCGTATTTTGCATCTAAAAAGTAGGAAGA
5 CCTCAAATAAATGAGTCTTTGTTCTTGGCCAGGGAACACGCGTTGTGACAATTTGATAACTGTTTTCTAGGGTA
TGTCGTGTTATTAGTTAAAAACCTTGCCCTGGGACGTAGCATTTTCAGTAAATACTGTTGAATAAGCAAATGAACT
TAAGCTTCTATGTATAGAAACCTTAAGTCACTTACATTCTGATTAGCAGAGTAATTGAATATTCTTTCAATGTGT
AGCTCTATCCCCAGAACCCACAGAATATTGGAAGTGTAAAGGCCATCTATAGTTTAAACCAACTCGGTAAATAGAT
10 AATAGAAAGATGTGGTATGTGGCAGTGACAACCTGAAGGTTGTGACTAGAACCTCGGTCTCGGAGTCTCTGAGTCTTATTA
TATCACACCTTAAGCTGGTCACCAAGCCCATGCTGTGATCTCCATTTGTGATAGCAACAAGAAAAGACTTCAGGACAT
TCTTTCCCTTTACCCTAATCCTTGATCTGCAGTCTTATTTAGAAAAGCTTAATGTTAAAGATCTAGTTTATCAAAA
CTAAAGATAACAAGGAGTATGAGAATTTCTATTTCCGAGTGTAAAGGAGGAGATGTTTCTTGGCTTCTCTGAGCC
TGCAGGCCCTTCTTGTCTTTTAAAGGAAGTAGAGAGAGGGAGGAAAGTAAAGTATGCTTTTGTTTTTAAAGTTACT
15 TTGCTGGGAGTAGTTTGTGATGCCTTTGTGTTTCTGTGGGTGGAATTAAGTACTTAAGTTTAAAGTAGTTGGGACT
ATTTAAACAAATGCCTATCCAAATGTTTGGCCATAAAGGCAGAGGGTATTGGCTTTAGAAGTTAATCTCTCCAGG
AGTGAATAATTAGCTTCTAAACCAGAAGCAGCAGAGCTAAATAAAGTAATTTTCCCAAGTGGCCAGTGCATGATGTA
AAGGTAGATTAACAAAAATGAGAGGGGCCATTTCTGTAGTAAAGACTAAGCCATGTTGAACAGCCCTGTTGAGGAT
TTTATTTTAAATCTATACATTTCAAAAGGAGCTTTGTGATGTCTTTCCCTATTGTTGTTTGGACTAGGAAGCCC
20 CACCCAGTGTGTTGTTGAAGGCAGAAAGTCGTTGAAAGCAAGCTGGGATTGAAACAGTGGATTGAGGTTTCGAATAT
CCAGTGAACCAAAATATATCAGGGTCCCTGGCCAAGATGAGTGACCATTCTGAGGTGTTAAGTATTTCTTGAAT
GGGGATTTTAGGAAAAGTTTCTGTATTTCTGTGCTCATTTTGTGACCTCTGTATGTGCAAAATCTCTAAGGGGT
GTTTGGGCACCTAGATTTCTTGGATGTCAGATTGTTGTATGAAACAAATTTTAAATGTTTGTATACACTGG
ATTTAAATAGTTTACTAAAGTGTTTAATTTTTCATCTTAATTTTACAGTCTTATAGTCTTTAGATTAGGG
25 AGGCTGTTGATGGCATCCACATGTGCATTTAGTGGCATTAAATGTAATTCAGCTGAATTTAACAAATTTCTGACC
TAAACTTTGACATTTTAGATTAAAGTCGGTAAAGCACTGATTTAAACTGGATTTAACTGGATGAAATTTCTGATT
AATAAGTGTACTGACTGGATAAAATGCCAATGATTTAATAACAGCAAGCTTTAACAGGATGCCCTATATATTAGT
TAAAGTGAAGCAATGTGAATTAGGTACCTTCTGCTGCGTGGAAAAGACCGTATGACTACCCACACCAGCCTTC
TCTTCGCTCTGAGTGTAGCTAACCGTTTCTGTTTTTTTCTCTAGGGTTTGGAAATCCCTGTCTCCAGGTTGCT
30 GGGATTGACTTCTTGTCTCAATTGAAACACTCATTTCAATGGAGACAAAGAGAATTAATGCTTTGTGCTGATTCTAT
TTGAATCGAGGCATTGGGAACCCCTGTATGCTTGTGTTGGAAGAAGCAAGTACACCATGACTGAGCTTCTCTAA
AGTTCGAAGAAGTTAGAGGACTATACATTTCTTTGAACTTTTATAATAAATTTTGTCTGCTGTTTGGAAACC
AGGCTGTTAGAGGGGTGAGTGACAAGTCTTACAAGTGGCCTTATCCAACCTCAGAAATTGCCAACGGAACCTT
GAGATTATATGCAATCGAAAGTGACAGGAAACATGCCAATCAACTCACTCTTAATGATGATGGATGGCCAGAAAT
35 GATTGGCAGCTCTCTTGGCAGTCCGATGGAGATGGAGGATGCTTGTCAATGAAAGGACCGCTGTTGTTTCCATT
CGAGCTACACAAGAAAATGTCATCCAAATCGAGGGGTATATGCCCTTGGATTGCATGTTCTGCAGCCAGACCT
TCACACATTCAGAAAGCCCTTAATAAACATGTCTTAATGCAACACCGGCCCTACCTCTGTGAACAGCAGTTCTCG
GGTTGAAGCAGAGTATCTCAGTCCGCTTGATAAAAGTCAAGTGGCAACAGAACTCCCAAGGAAAAGAAATGCAAG
GAAAATGAATTTAGCTGTGAGGTATGTGGGCAGACATTTAGATGCTGCTTTTGTAGTTGAGATCCACATGAGAAC
40 ACAAGATCTTTCACTACGGGTGTAACTATGTCGGGAAGGAAGATTTCAAGGAGCCTTGGTTTCTTAAAAATCACAT
CGGACACATAATGGCAAATCGGGGGCCAGAAGCAAACCTGCAGCAAGGCTTGGAGAGTAGTCCAGCAACGATCAAC
GAGGTCTCCAGGTGCACGCGGCCGAGAGCATCTCTCTCTTACAAAACTCTGCATGGTTTGTGGCTTCTTATTC
CAAATAAAGAAAAGTCTAATTGAGCACCGCAAGGTGCACACCAAAAACTGCTTTGCGTACCAGCAGCGCGCAGAC
45 AGACTCTCCACAAGGAGGAATGCCGTCTCGAGGGAGGACTTCTGCAAGTTGTTCAACTTGAGACCAAAATCTCAC
CTGAAACCGGGGAAGAACCTGTCTGATGCATCCCTCAGCTCGATCCGTTACACCACTTCCAGGCTTGGCAGCTGG
CTACCAAAGGAAAAGTTGCCATTGCCAAGAAGTGAAGGAATCGGGGCAAGAGGAGCACCACACAGCAGGATTC
GAGTTCCGAGAAGGAGCTTGGAGAAAACAAATAGGGCAGTTGTGCAAGGCTCTCGCAAGAGAAAAGAGTGCAAA
CACTCCCACGGGCAAGCGCCTCCGTGGACGCGGATCCCAAGTATCCACAGTAGCAAGGAGAAGGCCACTCACTGCT
CGAGTCCGGCAAGGCTTTTCAAGCCTACCACAGCTGGTCTTGCACTCCAGGTTCCACAAGAAGGACCGGGGGC
50 CGGCGCGGAGTCGCCACCATGTCTGTGGACGGGAGGACCGGGGACGTTCTCTCTGACCTCGCCGCCCTCTG
GATGAAAATGGAGCCGTGGATCGAGGGGAAGGTGTTCTGAAGACGGATCTGAGGATGGGCTTCCCGAAGGAATCC
ATCTGGGTAAGCTGCCCTGTCTCCGTCCGTGCTGTTCCGCTGTCTGTCTGTCTGCTTCCCGCTCTCCCCCTCTCTA
TTCCCATCTCCAGACAACGCTGGCCAGGAATGGGGTTTGGAGAGCCAGAGTCAAGTCCAGGCTCTTTTGGTATCA
CTCTGTGTAAGTCATTTAACCTCTCAGGGCCTTAATTTCTCATTTCTGTAATAACAGGGTTGAGTTAAGAGGCT
55 CCTTGTCTGAAAATATATATATATTTTTTAAACGTGTATCTGTTGCTACAAAAACACTTTAAAAAAAATA
ACTTGTGTCATCCAGGCCAAATGCATGCTTCTTAAGTGGGGGATTTTGTCTCCCAATCAGTATCTGGCAATGTCTG
GAGGCAATTTGGTTGTCTACTGTGTGTGTGGGTGTGCTGCTGGCATCCAGTGGGCAGAGGCCAGGACACTGCT
CAGCATGGTACAGTGCACAGGACAGCCCCATCATCAAGAATTATCTGGTCCCAATCTCAATAGTTTGAAGATTG
AGAGACCTTAGCCTTCACTTAAGTTTTTCTGGCGTCTCTGATCTTTTTCTGTAGTGAATTTCTAGTGGCCATAAAA
60 GGTACTGGGAGTGATCAACTAGAGCCAGGAATATTTTGGGCAGCCGTTGGTGTGCTGCCAAAACCTTGTCTTT
GTGCTGCGCAAGCTAGTATCCATTTATAGGTACCTCAGGAACCAAAATGATTGTCTATAAAATACAAGGAATGTGA
GCACACTGAAGACATTTTAAAGAGGCTCATTGTCTCAGCAGAAATTTTCAAGTACTAGTGGCATTATAGAAA
GAAGGTGATCACTGAAGGCATGCTACATAATATCTCTGAGCCCTGGTGGGCGTTATCTAGGGCAAGGATCCAC
CTGTGTTTGGAGTTGGCCCCCTCTCACTGTAGCCAGGCTTCTCTATCAGAGTTTGTAGTATTTGTTGAATAGA
65 GGATCTTGTGCTGTTTAAAAACAGTTGAAAAGACCTGATGGGCAGGCGTAATTGACAAGCGAATGATGGGAACATGA
ATCGGCTCTAGGGAAGCATCTGTCAAAGTGGTCTTGGTTAAACAAGTGCCCTCTCTCTCAGTGTCACTTGATT
GTGTGCTTGAATCTTTCGGAAGAACTGGGTGTATGAGACCCAGCATGAATTTGCCCAACAGGATGATGGACTTCT
CTTCACTGCTCTTTCAGCCAGTGCCAGTCTTTCTGTATCATGTGATGAGTACGTAGAGAACTGTAGCTGTATATCA
AATCTTTAGAATGTTTTGAGTTTCTGGGACACAGGAACCCAGCACTTAGCATACTACAAATCTAATGTCTTAA
70 TGGCATCATAAAAAAGAGGCTTTAAACACAGACTCCAGTTAGCTAAGTGGTTTCTGCTAGTGGCGGTAAGTGGC
GGGCGCTGTGAGATGCCCAAGTTCCCTGAAAGAAATGAAAGGCCAGTTACCGGTAGGTTGGGAGGAAACATGGG
CTAGATCATCAGGCAGGACAATGCCTGGCTGGGTGGGAGCACCCAGCTGGCGTTGAGTTCTGGTTCTACC
ACTCGCTGTGTTTGTGACCAATATGAGTTGCTTAACCTTCTTGTGCTACTATTTCCTGTTTGCAAAATGGTTCA
TTGACCCCTGTCTCCACCTCCCAAGGACAATTTCAACAGCCTATTGTAAAAAGATCAGAGTCTTTAAAAAATA

TAACTGTAAAGTCAGAGGTGATGCTTGAAAGAGCAGGAACCAGGTAGATGTGGAATGTCATGTCCTTTGTTCTAA
 AGAAAAGGCATTTTCATAGCTTTTGGATATGACGCAACATACCATAAACTCTGACACATAGTTGGGAGTCGGAAAT
 TGCAACAACGCCAGTTATAAACCAGCTAGTTTGGGTATGATTGTAAGAAAAAAGCTGGCCATTCTGTATTG
 5 GGGAAATGATTTTCTTAACTTATATTATCTTAGTAGTCTAGATTTATCATATTGTACTATCATCTGGCTTTTT
 AAGACTTAAGAAGTCAAGTAAATTTTTTTCTTTCTTTAGACACTATATAGATCATCAAGGGTGTCTGTCTTAC
 AGGTGGATAGTGATGATCTACAGTGAGGGGACATTTATTTAAACCTTAAACATTCATGTGTTTTGGGGGTGGTA
 TTTAACGGCAGCACCTCTGATTGTCTTTTGGAGGGCTGGTGTGTGTTGAAGTTCTGTCTCTCTCCAGTGGACT
 CTAACCTCTCTGATGCACGTGAGACACATTGTCTATTGTCTGTCAGAACTAAAGCCAAACACTGTCTATCTGGG
 10 GACAGGTTTTCAATTGTGATCTCTTTCGCCACATGAGTGTGTTGTGGACAATACAGCCTGCTTTCCAAAACCTT
 GCTAAATTTGACAGACTTCTCTAGAGTGTGCTTGCCCAATGCCAGACTTCTTTTCTGTTGAAGATTAGTTGTGCTT
 GCTGCCCTCTAGTGGTCAGTTGTTAATCTAACCTTAAACGGCTTATTTTTCCCTGGTGGTTGGAAGTTGACG
 GTTGTAAATGGCTCATTTTTCTAAATATTCTGAAGAAGATAATTTTCCCGCCAGTATGTATGTCCACCTTCAG
 TTTGCCAGATCGCTGCTCAGAGACACTGAGAACCGGAAGCTGCCCGGCAATTCAGTCTATGAAATGATCTTT
 15 TTTGTGTTAAGCGAAAGAACTGAATGTTAATAGTGTACTCTGCTGACCCAGAAAAAACAACAAAT
 CATGTTATAACACTCTAAACCTTCAACAACCTCCACAGCATTGGTGTGTGTCTAGCCGTTGTGTTCAACCCG
 ATGTTATATAAAGAATTTTTTCATGCTTTCCAAAATGTTTATGTCAAGAATATTTAAGTCAGCATGCCCTTATTC
 AGGTACTTCAGCTACCTTCTTATATAAATATTTTGTGTTTTCTTTAAGATAAAATGATGATGGAGGAAAAATAA
 AACTCTTACACTTCAAGAGAGTGTATTGTGGAAGTTTTCCGTTCAAATTATTACCTCAATATTCTATCT
 20 CAGAACGCATACAGGTAAAGAACTTTATTTTTTAACCATGCAATTAGTTAAATTTATGTAGTTTCTTAACTT
 GTTGTGTTGTTTCAGATACTCTGCCAGATCCTTGGACTAGCTTAAGGATAAATATGTAGCATGTTGATTGCAGTGG
 TTATTTTTATTCTTTAGTGCCATTGTAACCTGAGCCATTGTCTTATTGTCAGTTCAATTTCTTTCTTTCTTTT
 TGTTTTTGAGACGGGCTTGTCTGTCTCACCTCGGCTGGAGTGCAGTGGTGAATTTCCGGCTCACTGAGCCTCC
 ACCTCCCTGGTTCAAGCAATACTCTGCCCTCAGCCTCCCAAGTGGGATTACAGGTACCTGCCACCAACCCG
 25 GCTAATTTCTGTATTTTAGTAGAGATGGGGTTTACCATGCTGGCCAGGCTGGTTTCCAACTCCTGACCTCAAGT
 GATCCGCTCACCTTGGCCTCCCATAGTGTGGCCTCCCATAGTGTGGGATTACAGGCGTGAGCCACCGCGCCCGG
 ACAAGTTCAATTTAGTTTACTGCTATGCTCTGACTCTTATCTTATTAAGCTACAGTATTTAAATG
 CTGCATCTTATGTCTTTATGATTGAGAATGAAATGAGAATTTAGTAGTCTTGAGATTGTAAGGAGCTATG
 ACATCATGATGTAGGAGGCTGCGTAGATTGAAATTTTCTCTCTTCCACTTACTATCTGTGACCTTTGGGCAAGT
 30 TATTAACTTTTTGTGCTTTTAGTTTTCTTGTGTGTAAGTAGAATAATACATATTTCCCTAGGGCTGTTAGGA
 AGATTAATAAGTTAGAAGTGTGCTGTTAATTTTTCTATTGAAGATAGGCATTCAATTTCAAATATTCAATAC
 AGTAAGGATGATAAAGAACTGATGAGAACTCTATGTGATAGTAGATCGAGAAAGCAAAAGGAGGAAAGAAGCCTG
 TTTCTTAATAAATAGATATTTGATCTATTTTCACTGCTTTTCTATACACTTCTATAATAAAGTGCCATTCTTGCTT
 TAGGTGAAAAACCATACAAAATGTGAATTTTGTGAATATGCTGCAGCCAGAAAGACATCTCTGAGGTATCACTTGA
 35 GAGACATCAAGGAAAAAACAACCGATGTGCTGTGAAGTCAAGAACGATGGTAAAAATCAGGACACTGAAGAT
 GCATATTAACCGCTGACAGTGCGCAAAACCAAAATTTGATAAGATTGTTGATGGTGCCAAAGATGTTACAGGCA
 GTCCACCTGCAAAGCAGCTTAAGGAGATGCCTTCTGTTTTTCAAGATGTTCTGGGCGAGCTGCTCTCACCAGC
 ACACAAAGATACTCAGGATTTCCATAAAATGCAGCTGATGACAGTGTGATAAAGTGAATAAAAAACCTACCCCT
 GCTTACCTGGACCTGTTAAAAAGAGATCAGCAGTTGAAACTCAGGCAAAATAACCTCATCTGTAGAACCAAGGCGG
 40 ATGTTACTCTCTCTCGGATGGCAGTACCACCCATACTTGAAGTTAGCCCCAAGAGAAGCAACCGGAGACCGC
 AGCTGACTGCAGATACAGGCCAAGTGTGGATTGTACGAAAAACCTTTAAATTTATCCGTGGGCTCTTCACAAT
 TGCCCGGCAATTTCTTTGAGTAAAGTTTGATTCCAAGTATCACCTGTCCATTTTGTACCTTCAAGACATTTTATC
 CAGAAGTTTAAATGATGCACACGAGACTGGAGCATAAATACAATCCTGACGTTCAAAAACTGTGCAAAACAAGTC
 CTTGCTTAGAAGTCGAGTACCGGATGCCCGCAGCTGTGCTGGGAAAAAGATGTGCTCTCCCTCCCTAGTTTCTGT
 45 AAACCCAAGCCCAAGTCTGCTTTCCCGGCGAGTCCAAATCCTGCCATCTGCGAAGGGGAAGCAGAGCCCTCTG
 GGCCAGGCAAGGCCCCCTCTGACTTCAGGGATAGACTTAGCACTTTAGCCCCAAGTAACCTGAAGTCCCAAGACC
 ACAGCAGAATGTGGGGGTCCAAGGGGCGGCCACCAGGCAACAGCAATCTGAGATGTTTCTTAAACCAAGTGTTCCT
 CCTGCACCGGATAAGACAAAAAGCCGAGACAAAATGAAACCTTCCAGTAGCTCTCTCAGCCCCACCTCG
 GCAGCAGTAACATCAATGGTTCCATCGACTACCCGCCAAGACAGACCCGTTGGGCACTCCGGAAGAGACTA
 50 TTTCTGTAATCGGAGTGCCAGCAATACTGCAGCAGAATTTGGTGAGCCCCCTCCAAAAAGACTGAAGTCCAGCGTG
 GTTGGCCTTGACGTTGACCAGCCCCGGGGCAATTACAGAAGAGGCTATGACCTTCCCAAGTACCATATGGTCAGAG
 GCATCACATCACTTTACCGCAGGACTGTGTGTATCCAGTCCGAGGCGTGCCTCCCAACCAAGGTTCTGTAGCTC
 CAGCGAGGTGCTATTCTCAAATGTGCTGACTGTATCAGAGCCCTATGGTGGCTCCGGGCCACTTTACACTTGTGTG
 CCTGCTGGTAGTCCAGCATCCAGCTCGACGTTAGAAGGATTGTCATGAGGGGCGTGTGTTTAAATGGCTTAC
 55 AGTGATTAATAGCTAATCCAGGCATTCTCAGTGGAGATGGTACCCTCCCAAGGGTGGGGGGTAGGCAGCCAGAAG
 TTCTTGGGGTTCAGAGAGAAGCATTCTTAGATACGGCAGTGGTTTGTGGTCTCCAAAGGCTTACTTAACTCTGT
 GGGTTTAACTCTTAACTCTGTGATTATTTATCTTTTGTGTTAGTCTTACTTTATTTTTAGAGAAAGGGTCTT
 GCTCCGTCATCTAGATTGGAGTGCAGCGGTGTAATCATAGCTTACTGTAGTCTTGAATTCCTGAGTTCAAGATC
 CTCTGCCTCAGCTTCCAGGTAGCTGAGACTATATGTGCTGCTACCATGCACAGCTGATTTTTAAATTTTTTTG
 60 TAGAGATGGAGTTGCCAGGCTGGTCTTGAACCTCTGGCCTGAGGTGATCCTCTCGCTTGACCTCCCAAGTATCT
 TAGACTACAGATGCACTCCACCACGCTTG

SEQ. ID. No. 10

ZABC1 Open reading frame

65 ATGCAATCGAAAGTGACAGGAAACATGCCAACTCAATCCCTCTTAATGTACATGGATGGGGCAGAAGTGATTGGCA
 GCTCTCTTGGCAGTCCGATGGAGATGGAGGATGCCTTGTCAATGAAAGGGACCGCTGTGTTCCATTCCGAGCTAC
 ACAAGAAAAAATGTCTCAAAATCGAGGGGTATATGCCCTTGGATTGCATGTTCTGCAGCCAGACCTTCACACAT
 TCAGAAGACCTTAATAAACATGTCTTAATGCAACACCGGCCTACCCTCTGTGAACCAGCAGTCTCTCGGGTTGAAG
 70 CAGAGTATCTCAGTCCGTTTGATAAAAGTCAAGTGCGAACAGAACCTCCCAAGGAAAAAGATTGCAAGGAAAAATGA
 ATTTAGCTGTGAGGTATGTGGGCAGACATTTAGAGTCGCTTTTGTATGTTGAGATCCACATGAGAACACACAAAGAT
 TCTTTCACTTACGGGTGTAACATGTGCGGAAGAAGMTTSRRSSAGCCTTGGTTTCTTAAAAATCACATGCGGACAC
 ATAATGGCAAAATCGGGGGCCAGAAGCAAACTGCAGCAAGGCTTGGAGAGTAGTCCAGCAACGATCAACGAGGTGCT
 CCAGGTGCACGCGGCCGAGAGCATCTCTCTCTTACAAAATCTGCATGGTTTGTGGCTTCTTATTTCCAAATAAA

GAAAGTCTAATTGAGCACCGCAAGGTGCACACCAAAAAAACTGCTTTCGGTACCAGCAGCGCGCAGACAGACTCTC
 CACAAGGAGGAATGCCGTCCTCGAGGGAGGACTTCCTGCAGTTGTTCAACTTGAGACCAAAATCTCACCCTGAAAC
 GGGGAAGAAGCCTGTCAGATGCATCCCTCAGCTCGATCCGTTACCACCTTCCAGGCTTGGCAGCTGGCTACCAAA
 5 GGAAGAGTTGCCATTGTCGAAGAAGTGAAGGAATCGGGGCAAGAAGGGAGCACCAGACAACGACGATTGAGTTCGG
 AGAAGGAGCTTGGAGAAACAAATAAGGGCAGTTGTGCAGGCCTCTCGCAAGAGAAAGAGAAGTGAACAACTCCCA
 CGGCGAAGCGCCCTCCGTTGGACGCGGATCCCAAGTTACCCAGTAGCAAGGAGAAGCCCACTACTGCTCCGAGTGC
 GGCAAGCTTTCAGAACCTACCACAGCTGGTCTTGCCTCCAGGGTCCACAAGAAGGACCGGAGCGCGCGCGG
 AGTCGCCCCACCATGTCTGTGGACGGGAGGACGCGGGGACGTGTTCTCTGACCTCGCCGCCCTCTGGATGAAAA
 TGGAGCGCTGGATCGAGGGGAAGGTGGTTCTGAAGACGGATCTGAGGATGGGCTTCCCGAAGGAATCCATCTGGAT
 10 AAAAAATGATGATGGAGGAAAAATAAAACATCTTACATCTTCAAGAGAGTGTAGTTATTGTGGAAGTTTTCCGTT
 CAAATTATTACCTCAATATTCATCTCAGAACGCATACAGGTGAAAAACCATACAAAATGTGAATTTGTGAATATGC
 TGCAGCCCCAGACATCTCTGAGGTATCACTTGGAGAGACATCAAGGAAAAACAAACCGATGTTGCTGCTGAA
 GTCAAGAACGATGGTAAAAATCAGGACACTGAAGATGCATTAACCGCTGACAGTGCAGCAACCAAAATTTGA
 AAAGATTTTTGTAGTGGTGCCTTACAGGACAGTCCACCTGCAAGCAGCTTAAGGAGATGCCCTCTGTTTT
 15 TCAGATGTTCTGGGCGAGCGCTGTCTCTCACCAGCACACAAAGATACTCAGGATTTCCATAAAAAATGCAGCTGAT
 GACAGTCTGTATAAAGTGAATAAAAAACCTACCCCTGCTTACCTGGACCTGTTAAAAAAGAGATCAGCAGTTGAAA
 CTCAGGCAAAATAACCTCATCTGTAGAACCAAGGCGGATGTTACTCTCTCCGATGGCAGTACCACCCATAACCT
 TGAAGTGAACCAAGGAAAAAGCAAGGAGACCGCAGTGCAGTGCAGATACAGGCAAGTGTGGATTGTACGAA
 AAACCTTTAAATTTATCCGTGGGGGCTCTTCAAAATGGCCGCAATTTCTTTGAGTAAAGTTTGTGAATATGC
 20 TCACCTGTCCATTTTGTACCTTCAAGACATTTATCCAGAAGTTTTAATGATGCACCAGAGACTGGAGCATAAATA
 CAATCCTGACGTTTCAAAAACTGTGCAAAACAAGTCTTGTCTAGAAAGTGCAGCTACCGGATGCCCGCCAGCGTTG
 CTGGGAAAAGATGTGCCTCCCTCTCTAGTTCTGTAAACCAAGCCCAAGTCTGCTTTCCCGGCGCAGTCCAAAT
 CCCTGCCATCTGCGAAGGGGAAGCAGAGCCCTCTGGCCAGGCAAGGCCCTCTGACTCAGGAGATAGACTCTAG
 CACTTTAGCCCCAAGTAACCTGAAGTCCACAGACCACAGCAGAATGTGGGGGTCCAAGGGGGCCGACAGGCA
 25 CAGCAATCTGAGATGTTTCTAAACCAAGTGTTCCTCTGACCGGATAAGACAAAAAGACCCGAGACAAAATTGA
 AACCTTCTCAGTAGCTCTCTCAGCCACCTCGGCAGCAGTAACATCAATGGTTCCATCGACTACCCCGCCAA
 GAACGACAGCCCGTGGGCACTCCGGGAAGAGACTATTCTGTAATCGGAGTGCCAGCAATACTGCAGCAGAATTT
 GGTGAGCCCCCTTCAAAAAAGACTGAAGTCCAGCGTGGTTGCCCTTGACGTTGACCGCCCGGCAATACAGAA
 GAGGCTATGACCTTCCCAAGTACCATATGGTCAGAGGCATCACATCACTGTTACCGCAGGACTGTGTGTATCCGTC
 30 GCAGGCGCTGCCCTCCCAACCAAGGTTCTGTAGCTCCAGCGAGGTCGATTCTCCAAATGTGCTGACTGTTTCAAG
 CCCTATGGTGGCTCCGGGCCACTTTACACTGTGTGCTGCTGAGTGTAGTCAGATCCAGCTCGACGTTAGAAGGTC
 TTGGTGGATGTGCTGCTTACTCCCCATGAAATTAATTTTACTTTCATCTTGTGAGAAGCAATGGTGAAGCTAC
 TGAATAAGCTGTGATTGTACTGTACATAAAACATATGAGGAATCTGCAAGGAACACTACAGTTGTGTAA

SEQ. ID. No. 11

ZABC1 Protein

MQSKVTGNMPTQSLLMYMDGPVIGSSLSGSPMEMEDALSMKGTAVVPFRATQEKVNIQIEGYMPLDCMFCSQTFTH
 SEDLNKHVLMQHRPTLCEPAVLRVEAEYLSPLDKSQVRTEPPKEKNCKENEFSCEVCGQTFRVAFDVEIHMRTHKD
 40 SFTYGCNMCGRXXXXPWFLKNHMRTHNGKSGARSKLQGGLESSPYKICMVCGLFPNK
 ESLIEHRKVHTKKTAFGTSSAQTDSPQGGMPSSREDFLQLFNLRPKSHPETGKKPVRCIPQLDPFTTFQAWQLATK
 GKVAICQEVKESQEGSTDNDDSSSEKELGETNKGSCAGLSQEKEKCKHSHGEAPSVADPKLPSSKEKPTHCEC
 GKAFRTYHQLVLSRVHKKDRRAGAESPTMSVDGRQPGTCSPLAAPLDENGAVDRGEGGSEDGSEDGLPEGIHLD
 45 KNDDGGKIKHLTSSRECSYCGKFFRSNYLNIHLRTHGTGKPKYCEFEYAAAQKTSRLYHLERHHKEKQTDVAEE
 VKNDGKNQDTEADLLTADSAQTKNLKRFDDGAKDVTGSPPAKQLKEMPSVFQNVLSAVLSPAHKDQDFHKNAAD
 DSADKVNKNPTPAYDLLKKRSVETQANNLICRTKADVTPPPDGSTHNLVSPKEKQTETAADCRYRPSVDCHE
 KPLNLSVGAHLNCPAISLSKSLIPSTCFCTFKTFYPEVLMHQRLEHKYNPDVHKNCNRKSLRSRRTGCPPAL
 LGKDVPLPSSFCPPKPKSAFPAQSKSLPSAKGKQSPGPGKAPLTSIGDSSLTAPSNLKSHPQNVGVQGAATRO
 50 QQSEMFPKTSVSPAPDKTKRPETKLKPLPVAPSQPTLGSSNINGSIDYPAKNDSPWAPPGRDYFCNRSASNTAAEF
 GEPLPKRLKSSVVALDQPGANYRRGYDLPKYHMYRGTITSLLPQDCVYPSQALPPKPRFLSSEVDSPNVLTVQK
 PYGGSGPLYTCVPAGSPASSSTLEGLGGCQCLLPMLNFTSSFEKRMVKATEISCDCTVHKTYEESARNTTV

SEQ. ID. NO. 12

1b1

GGAACAGCTATGACCATGATTACGCCAAGCTCGAAATTAACCCCTACTAAAGGGAACAAAAGCTGGAGCTCCACC
 GCGGTGGCGGCGCTCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGGCTCCACCGACAGCCAGG
 55 CACTGGGCAGCACGCACTGGAGACCCAGGACCCCTGTGCAGGACGAGCTCCGGGTGACACGAGGGGACTGAAGATAC
 TCCCACAGGGGCTCAGCAGGAGCAATGGGTAACCAAAATGAGTGTTCCTCCAAAGAGTTGAAGACCAAGAGAATGAAC
 CAGAAGCAGAGACTTACCAGGACAACCGCTGTGCTCTGAACGGGGTTCAGTGGTGGTGTGACCCACACAGTTCA
 GCACTTAGAGGAAGTCGACTTGGGAATAAGTGTCAAGACGGATAATGTGGCCACTTCTTCCCCCGAGACAACGGAG
 60 ATAAGTGTCTGTGCGGATGCCAACGGAAAGAACTTGGGAAAGAGGCCAAACCCGAGGACCAAGCTGCTAAATCTC
 GTTTTTCTTGATGCTCTCTCGGCCTGTACCAGGACGTACCGGAGACCAAGCCGAGATTCTATCCCTTGGATCAGT
 GAAGCTTGATGTACGCTCCAATAAAGCTCCAGCGAACAAAGACCAAGTGAGAGCTGGACACTTCCGGTGGCAGCT
 GGACCGGGCAGGACAGATAAAACCCAGGGCAGCCCGGCCCAAGACAAGGTCTCTGTGCGCCAGGGATC
 65 CCACGCTTCTCCCACTGAGACAGGAGGAGCAGGAGAGAGCTCCCTCCAAGCCCAAGGACTCCAGCTTTTTTGA
 CAAATCTTCAAGCTGGACAAGGGACAGGAAAAGGTGCCAGGTGACAGCCAAAGGAAAGGAGGAGGAGGAGCAT
 CAAGACAAGGTGGATGAGGTTCCTGGCTTATCAGGGCAGTCCGATGATGTCCCTGCAGGGAAGGACATAGTTGACG
 GCAAGGAAAAAGGACAAGAACTTGAAGCTGCGGATTGCTGTGCTTGGGGACCCAGAAGGACTGGAGACTGC
 70 AAAGGACGATTCCAGGACAGCTATGACAGGAGATAATAATTCCATCATGAGTTTCTTTAAACTCTGGTTTCA
 CCTAACAAAGCTGAAACAAAAAGGACCCAGAGACCAAGGAGGCTGGCAAGAAATTCAAAGGATGCAACCCATCGGG
 AGTCAGACAAAGCCAACTTTACATCCAGGAGACCAAGGGGCTGGCAAGAAATTCAAAGGATGCAACCCATCGGG
 GCACACACAGTCCGTGACAACCCCTGAACCTGCGAAGGAAGGCACCAAGGAGAAATCAGGACCCACCTCTCTGCCT

CTGGGCAAACCTGTTTTGAAAAAGTCAGTTAAAGAGGACTCAGTCCCCACAGGTGCGGAGGAGAATGTGGTGTGTG
AGTCACCAGTAGAGATTATAAAGTCCAAGGAAGTAGAATCAGCCTTACAAACAGTGGGACCTCAACGAAGGAGATGC
TGCACCTGAACCCACAGAAGCGAAACTCAAAAGAGAAGAAAGCAAACCAAGAACCTCTCTGATGGCGTTTCTCAGA
5 CAAATGTCAGTGAAAGGGGATGGAGGGATCACCCACTCAGAAGAAATAAATGGGAAAGACTCCAGCTGCCAAACAT
CAGACTCCACAGAAAAGACTATCACACCGCCAGAGCCTGAACCAACAGGAGCACCACAGAAGGGTAAAGAGGGCTC
CTCGAAGGACAAGAAAGTCAGCAGCCGAGATGAACAAGCAGAAGAGCAACAAGCAGGAAGCCAAAGAACCAGCCCAG
TGCACAGAGCAGGCCACGGTGGACACGAACTCACTGCAGAATGGGGACAAGCTCCAAAAGAGACCTGAGAAGCGGC
AGCAGTCCCTTGGGGGCTTCTTTAAAGGCCTGGGACCAAAGCGGATGTTGGATGCTCAAGTGCAACAGACCCAGT
10 ATCCATCGGACCAGTTGGCAAACCAAGTAAACAAATCAGCACGGTTCACCAGGTTCTCTGCCACCAAGATGT
GTTCTCCTTACTCCATCTCCTCCCCAAACACGCTCCATGTATATATTCTTCTGATGGCCAGCAAAATGAAATTCTGC
CTAGAAATTAAGCCCCGAGCTGTTGTATATTGAGGTGTATTATTTACGTCTCTGGTCCAGTCTTTTCTGGCAAATAA
CAGTAAAGATGGTTTAGCAGGTACCTAGTTGGGTGAGAAGAGTCGATGATCACCAAGCAGGAAAGGGAGGGAATA
GAGGAATGTGTTCCGGTTAAGTGATGAAAATGGCAGTGGTGGCCGGGCGTGGTGGCTCTCGCCTGTAATCTCAGCA
15 CTTTGGGAGGCCGAGGCAGGTGATCACCTGAGGTGAGGAGTTCAAGACTAGCCTGGCCAAACATCATGAAACCCCG
TCTCTACTAAAAATACAAAAATTAGCCAGGCATGGTGGCACACACCTGTAGTCCCAGCTACTCGGGAGCCCAACGC
ACGAGAACCCTTGTACCCAGGAGGTGGAGGTGTCAGTGAGCCGAAGTTGCACCATTGCACTCCACCCTGGGCGAC
AGAGCAAGATTCTATCAAAAAAAAAAGGCAGTGGCAAGTAAGTTATAGAAGAGAAATGCTGCTAGAAGGAATTAAG
CGTTGTAGTAAACGCGTGCTCATCCTTAAGCTTGAAGAAGGGAGACGAAAATCCATTTGTTTAAATTCACATCTC
20 AAGGAGGGAGAACCCGGGCTGTGTTGGGTGGTTGCCAATTTCTAGAACGGAATGTGTGGGGTATAGAAAAAGGAA
TGAATAAGCGTTGTTTTTCAATAGGGTCTTGTAAATTATTGATGAGAGGGAAAAAGATTGACTGGGGAGGGCTTA
AAATGATTTGGGAAAACAATTGCTTTTGAGGCTCAGTGACAACGGCAAAGATTACAACCTTAAAAAAAAAAAAAAAA
AAACTCGAGACTAGTTCTCTCTCTCTCTCGTGCCGAATTCGATATCAAGCTTATCGATACCGTCGACCTCGAGGGG
GGGCCCCGTACCAATTTCGCCCTATA

25

15840666-1071597

Filtered query sequence:

5 TGTGATATTGATTTCATGCCCTCTTGACACTTGCCAAACATCACACGCTTG
CCATCCAGTCCACTCGATTTTGGCAGTGCAGATGAAAACTGGGAACCAT
TTGTGTTGAGTCCAGCAAGATGCCAGGACCTGCATGTTTCAGAACGAAGT
TCTTCATCATCCAATTTCTCCCTGTATATGGGCTTACCACNACTGCCGTT
AAGTCGTGTNAAGTCACCACTCAGGTACATAATGGAATAATTCTGCAAAG
10 GCAGGAGNCACTTTCTCTCCAGTGCTCAGACCATGAAAGTTTTCTGATGT
CTTTGGAACTTTGTCTGCAAATAGCTCGAAGGAGACATGGCCTAAAGGCT
CGCCATCTGCGGTGATATTGNAACATGGTAGGGCTGACCGTGGCTGTGGC
CATGACTTTTTTAGANTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
15 NNNNNNNNNNNNNNNNNNCCCAATGCGGGACAGAGAATCNAAGAACTGTATTA
GGGAAAGGGTCCTGAGTTTATGCCAAAGTTTCCCAGATTGGTTTTCCATTG
AAACGTAGCTCTGTGAGATACCATCAGGTGTTATGTGAAGAAATGTCTGT
GTAGTCAAATATGTTTGAGTGAGTGAGCCTGAGCTGAGCAAGACTTTACT
GCAAGACTTCCCATCTTCTGTCCCTTTTTATGCTAATGGGTAACACAAAC
20 TCCAAAAGTGGGGTGTACAGCATGAGGCATTAACAAAAATTTATTGGACC
CCACACACNN
NN
NN

Length = 743

30 Minus Strand HSPs:

S = rat CYCLOPHILLIN; q= SEQ ID NO 13.

35 Query: 372 TNCAATATCACCGCAGATGGCGAGCCTTTAGGCCATGTCTCCTTCGAGCTATTTGCAGAC 313
| | | | | | | | | | | | | | | | | | | | | | | |
Sbjct: 64 TTCGACATCACGGCTGATGGCGAGCCCTTGGGTCGCGTCTGCTTCGAGCTGTTTGCAGAC 123

40 Query: 312 AAAGTTCCAAAGACATCAGAAAACCTTTCATGGTCTGAGCACTGGAGAGAAAG 261
|||
Sbjct: 124 AAAGTTCCAAAGACAGCAGAAAACCTTCGTGCTCTGAGCACTGGGGAGAAAG 175

Score = 236 (65.2 bits), Expect = 1.5e-58, Sum P(5) = 1.5e-58
Identities = 52/58 (89%), Positives = 52/58 (89%), Strand = Minus / Plus

```

45  Identities = 52/58 (89%), Positives = 52/58 (89%), Strand = Minus / Plus

Query:   117 TGCTGGACTCAACACAAATGGTTCCAGTTTTTCATCTGCACTGCCAAAATCGAGTGG  60
          |||||||  |||||||  |||||||  |||||||  |||||||  |||||||  |||||||  |||||||
Sbjct:   348 TGCTGGACCAAAACACAAATGGTTCCAGTTTTTATCTGCACTGCCAAGACTGAGTGG  405

```

50 Score = 177 (48.9 bits), Expect = 1.5e-58, Sum P(5) = 1.5e-58
 Identities = 41/48 (85%), Positives = 41/48 (85%), Strand = Minus / Plus

Query: 60 GACTGGATGGCAAGCGTGTGATGTTTGGCAAGGTGCAAGAGGGCATGA 13

5 Score = 154 (42.6 bits), Expect = 1.5e-58, Sum P(5) = 1.5e-58
 Identities = 34/38 (89%), Positives = 34/38 (89%), Strand = Minus / Plus

Query: 153 AGA A C T T C G T T C T G A A C A T G C A G G T C C T G G C A T C T T G 116

10 Sbjct: 299 AGAACTTCATCCTGAAGCATACAGGTCCTGGCATCTTG 336

Score = 86 (23.8 bits), Expect = 1.5e-58, Sum P(5) = 1.5e-58
Identities = 22/28 (78%), Positives = 22/28 (78%), Strand = Minus / Plus

```

15  Query:   256 TCCTGCCTTTGCAGAATTATTCCATTAT 229
      ||||| | || |||||
      Sbjet:  193 TCCTCCTTTCACAGAATTATTCCAGGAT 220

```

Sbjct: 193 TCCTCCTTTCACAGAATTATTCCAGGAT 220